

**Listing of the Claims**

1. (currently amended) A silicon nitride film formation method, comprising:  
heating a substrate to be subjected to film formation to a substrate temperature;  
heating a wire to a wire temperature;  
supplying silane, ammonia, and hydrogen gases to the heating member [[; and]] wherein excess hydrogen gas is supplied in an amount sufficient to form a substantially 100% forming a conformal silicon nitride film on the substrate.

2. (original) The method of claim 1, wherein the substrate temperature is in the range of about 200 - 400°C.

3. (original) The method of claim 1, wherein the wire temperature is in the range of about 1800 - 2100°C.

4. (original) The method of claim 1, further comprising conducting the silicon nitride film formation method at a pressure in the range of about 10 - 50 millitorr.

5. (currently amended) A method for forming a silicon nitride film, comprising:

providing a process chamber;

heating a substrate contained within the process chamber to a substrate temperature;

heating a wire contained within the process chamber to a wire temperature;

supplying a silicon precursor material to the process chamber;

supplying a nitrogen precursor material to the process chamber;

supplying a process gas to the process chamber in an amount sufficient to form a substantially 100% conformal silicon nitride film on the substrate.; and

~~forming a conformal silicon nitride film on the substrate.~~

6. (original) The method of claim 5, wherein the silicon precursor material is selected from the group consisting of  $\text{SiH}_4$ ,  $\text{Si}_2\text{H}_6$ , and  $\text{SiH}_2\text{Cl}_2$ .

7. (original) The method of claim 5, wherein the nitrogen precursor material is selected from the group consisting of  $\text{N}_2$  and  $\text{NH}_3$ .

8. (original) The method of claim 5, wherein the process gas comprises hydrogen.

9. (original) The method of claim 5, wherein the substrate temperature is in the range of about 200 - 400°C.

10. (original) The method of claim 5, wherein the wire temperature is in the range of about 1800 - 2100°C.

11. (original) The method of claim 5, further comprising conducting the silicon nitride film formation method at a pressure in the range of about 10 - 50 millitorr.

12. (withdrawn) Apparatus for forming a silicon nitride film on a substrate, comprising:

a process chamber;

a substrate heater positioned within said process chamber, said substrate heater configured to receive the substrate;

a wire positioned within said process chamber;

a supply of silicon precursor material operatively associated with said process chamber;

a supply of nitrogen precursor material operatively associated with said process chamber; and

a supply of process enhancement gas operatively associated with said process chamber.

13. (withdrawn) The apparatus of claim 12, wherein the silicon precursor material is selected from the group consisting of  $\text{SiH}_4$ ,  $\text{Si}_2\text{H}_6$ , and  $\text{SiH}_2\text{Cl}_2$ .

14. (withdrawn) The apparatus of claim 12, wherein the nitrogen precursor material is selected from the group consisting of  $\text{N}_2$  and  $\text{NH}_3$ .

15. (withdrawn) The apparatus of claim 12, wherein the process gas comprises hydrogen.

16. (withdrawn) Apparatus for forming a silicon nitride film on a substrate, comprising:

a process chamber;

heating means positioned within said process chamber for heating the substrate to a substrate temperature;

a wire positioned within said process chamber;

means for providing a silicon precursor material to said process chamber;

means for providing a nitrogen precursor material to said process chamber;

and

means for supplying a process enhancement gas to said process chamber.

17. (withdrawn) The apparatus of claim 16, wherein said means for providing a silicon precursor material to said process chamber comprises means for providing  $\text{SiH}_4$  to said process chamber.

18. (withdrawn) The apparatus of claim 16, wherein said means for providing a nitrogen precursor material to said process chamber comprises means for providing  $\text{NH}_3$  to said process chamber.

19. (withdrawn) The apparatus of claim 16, wherein said means for supplying a process enhancement gas to said process chamber comprises means for providing  $\text{H}_2$  to said process chamber.

20. (new) The method of claim 1, wherein the conformal silicon nitride film has a highly uniform thickness.

21. (new) The method of claim 1, wherein the conformal silicon nitride film has a highly uniform thickness on all side portions.

22. (new) The method of claim 1, wherein the conformal silicon nitride film exhibits step coverage of very small-scale features on the substrate.

23. (new) The method of claim 1, wherein the conformal silicon nitride film has a highly uniform thickness providing about 100% step coverage.

24. (new) The method of claim 5, wherein the conformal silicon nitride film has a highly uniform thickness.

25. (new) The method of claim 5, wherein the conformal silicon nitride film has a highly uniform thickness on top, bottom, and side portions.

26. (new) The method of claim 5, wherein the conformal silicon nitride film exhibits step coverage of very small-scale features on the substrate.

27. (new) The method of claim 5, wherein the conformal silicon nitride film has a highly uniform thickness providing about 100% step coverage.